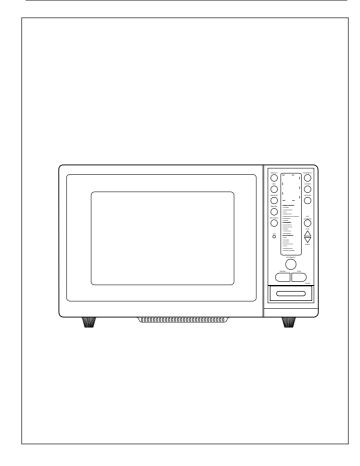


## **MICROWAVE OVEN**

CE124CF

# SERVICE Manual

#### MICROWAVE OVEN



#### **CONTENTS**

- 1. Precaution
- 2. Specifications
- 3. Operating Instructions
- 4. Disassembly and Reassembly
- 5. Alignment and Adjustments
- 6. Troubleshooting
- 7. Exploded Views and Parts List
- 8. PCB Diagrams
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#### 1. Precaution

Follow these special safety precautions. Although the microwave oven is completely safe during ordinary use, repair work can be extremely hazardous due to possible exposure to microwave radiation, as well as potentially lethal high voltages and currents.

### 1-1 Safety precautions ( 🗘 )

- 1. All repairs should be done in accordance with the procedures described in this manual. This product complies with Federal Performance Standard 21 CFR Subchapter J (DHHS).
- 2. Microwave emission check should be performed to prior to servicing if the oven is operative.
- 3. If the oven operates with the door open: Instruct the user not to operate the oven and contact the manufacturer and the center for devices and radiological health immediatly.
- 4. Notify the Central Service Center if the microwave leakage exceeds 5 mW/cm<sup>2</sup>
- 5. Check all grounds.
- 6. Do not power the MWO from a "2-prong" AC cord. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.
- 7. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including: nonmetallic control knobs and compartment covers.
- 8. Make sure that there are no cabinet openings through which people--particularly children--might insert objects and contact dangerous voltages. Examples: Lamp hole, ventilation slots.
- 9. Inform the manufacturer of any oven found to have emmission in excess of 5 mW/cm², Make repairs to bring the unit into compliance at no cost to owner and try to determine cause.

  Instruct owner not to use oven until it has been brought into compliance.

#### **CENTRAL SERVICE CENTER**

10. Service technicians should remove their watches while repairing an MWO.

- 11. To avoid any possible radiation hazard, replace parts in accordance with the wiring diagram. Also, use only the exact replacements for the following parts: Primary and secondary interlock switches, interlock monitor switch.
- 12. If the fuse is blown by the Interlock Monitor Switch: Replace all of the following at the same time: Primary, door sensing switch and power relay, as well as the Interlock Monitor Switch. The correct adjustment of these switches is described elsewhere in this manual. Make sure that the fuse has the correct rating for the particular model being repaired.
- 13. Design Alteration Warning:
   Use exact replacement parts only, i.e.,
   only those that are specified in the
   drawings and parts lists of this manual.
   This is especially important for the
   Interlock switches, described above.
   Never alter or add to the mechanical or
   electrical design of the MWO. Any design
   changes or additions will void the
   manufacturer's warranty.10.Always unplug
   the unit's AC power cord from the AC
   power source before attempting to
   remove or reinstall any component or
   assembly.
- 14. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
- 15. Some semiconductor ("solid state") devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs). Examples include integrated circuits and field-effect transistors.
  - Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground.
- 16. Always connect a test instrument's ground lead to the instrument chassis ground *before* connecting the positive lead; always remove the instrument's ground lead last.

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#### 1-2 Special Servicing Precautions (Continued)

- 17. When checking the continuity of the switches or transformer, always make sure that the power is OFF, and one of the lead wires is disconnected.
- 18. Components that are critical for safety are indicated in the circuit diagram by shading, **A** or **A**.
- 19. Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

#### 1-3 Special High Voltage Precautions

- 1. High Voltage Warning
  Do not attempt to measureany of the high
  voltages--this includes the filament voltage
  of the magnetron. High voltage is present
  during any cook cycle.
  - Before touching any components or wiring, always unplug the oven and discharge the high voltage capacitor (See Figure 1-1)
- 2. The high-voltage capacitor remains charged about 30 seconds after disconnection. Short the negative terminal of the high-voltage capacitor to the oven chassis. (Use a screwdriver.)
- 3. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.

=> : Touch chassis side first then short to the high voltage capacitor terminal by using a screwdriver or jumper wire.

#### **PRECAUTION**

There exists HIGH VOLTAGE ELECTRICITY with high current capabilities in the circuits of the HIGH VOLTAGE TRANSFORMER secondary and filament terminals. It is extremely dangerous to work on or near these circuits with the oven energized.

DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

#### **PRECAUTION**

Never touch any circuit wiring with your hand nor with an insulated tool during operation.

#### **PRECAUTION**

Servicemen should remove their watches whenever working close to or replacing the magnetron.

1-2 Samsung Electronics

## 2. Specifications

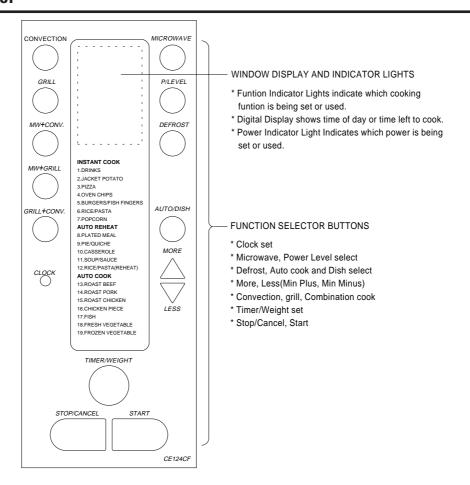
## **2-1 Table of Specifications**

ITEM MODEL	CE124CF
TIMER	99 MINUTES
POWER SOURCE	230V 50Hz, AC
POWER CONSUMPTION	MAX : 3,000W
	MICROWAVE: 1,600W
	GRILL: 1,300W
	CONVECTION: 1,400W
OUTPUT POWER	90W/900W(10 LEVEL POWER) (IEC-705 TEST PROCEDURE)
OPERATING FREQUENCY	2,450MHz
MAGNETRON	OM75P(10)
COOLING METHOD	COOLING FAN MOTOR
OUTSIDE DIMENSIONS	558(W) x 381(H) x 496(D)

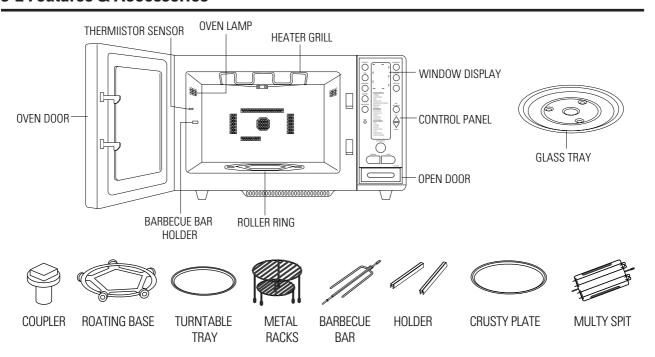
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## 3. Operating Instructions

#### **3-1 Control Panel**



#### 3-2 Features & Accessories

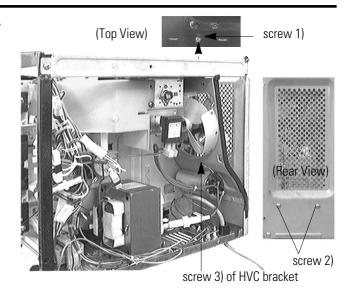


3-1 Samsung Electronics

### 4. Disassembly and Reassembly

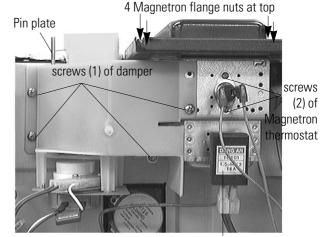
#### 4-1 Replacement of Fan Motor and HVCapacitor

- 1. Remove out panel.
- 2. Disconnect all connectors and terminals.
- 3. Remove a screw 1) securing the fan motor bracket.
- 4. Remove two screws 2) at back plate.
- 5. Remove a screw 3) securing HVC bracket for removal of HVC.



#### 4-2 Replacement of Damper, Magnetron

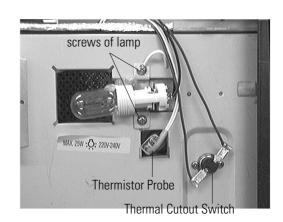
- After removing out panel and magnetron supporter, disconnect all the terminals and connectors from magnetron and damper assembly.
- 2. Remove four screws (1) securing damper Ass'y.
- 3. Remove two screws (2) securing magnetron thermostat.
- 4. Remove four magnetron flange nuts at top.
- =>: 1) When removing the magnetron, make sure that its antenna does not hit any adjacent parts, or it may be damaged.
  - 2) when replacing the magnetron, be sure to remount the magnetron gasket in the correct position and make sure the gasket is in good condition.
  - 3) Never install magnetron without metalic gasket plate, which should be packed with each magnetron to prevent microwave leakage.
  - 4) Check microwave leakage after repair work is carried out on magnetron.



Choke Coil

#### 4-3 Replacement of Lamp

- 1) Remove out panel.
- 2) Remove two screws securing lamp holder.



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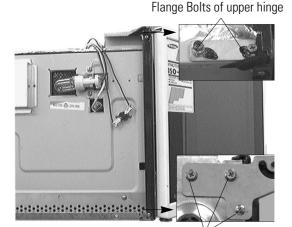
#### **4-4 Replacement of Door Assembly**

Remove hex bolts securing the upper hinge and lower hinge. Then remove the door Ass'y.

- After replacement of the defective component parts of the door, reassemble it and follow the instructions below for proper installation and adjustment so as to prevent an excessive microwave leakage.
  - 1. When mounting the door to the oven, be sure to adjust the door parallel to the bottom line of the oven face plate by moving the upper hinge and lower hinge in the direction necessary for proper alignment.
  - 2. Adjust so that the door has no play between the inner door surface and oven front surface. If the door assembly is not mounted properly, microwave may leak from the clearance between the door and oven.
  - 3. Perform the microwave leakage test.

#### 4-5 Replacement of H.V.Transformer

- 1. Discharge the high voltage capacitor.
- 2. Disconnect all the leads from the high voltage transformer.
- 3. Remove the mounting bolts on the high voltage transformer.
- 4. When replacing, connect the leads correctly and firmly.

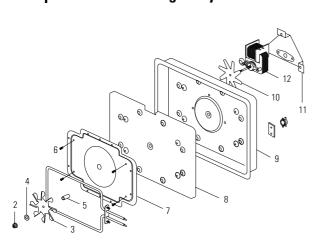


Bolts & a screw of lower hinge

#### 4-6 Replacement of Fuse

Disconnect the oven from the power source and remove the 15A fuse in the fuse holder in noise filter Ass'y.

#### 4-7 Replacement of Casing Ass'y and Convection Heater





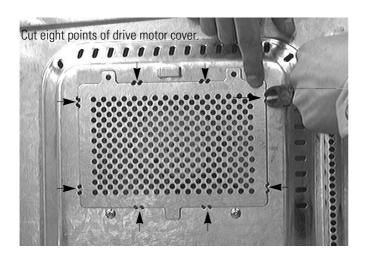
screws 1) of convection heater

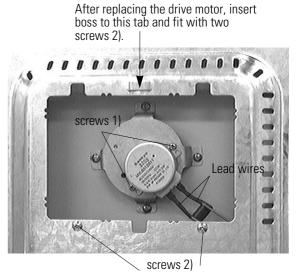
- 1. Remove out panel and back panel.
- 2. Disconnect all connectors and terminals.
- 3. Remove air duct and support-back.
- 4. Remove screws 1) securing convection heater Ass'y.
- 5. Remove nut'2', blade fan'3', spring washer'4' and bushing'5'.
- 6. Remove convection assembly '11', '12' and cooling fan'10'.
- 7. Remove four screws '6'.
- 8. Remove heater cover '7' '9'. Then heater adiabatic '8' will be disassembled.

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#### **4-8 Replacement of Drive Motor**

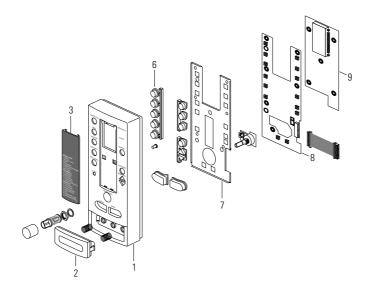
- 1. Take out the glass tray, guide roller and coupler from cavity.
- 2. Turn the oven upside down to replace the drive motor.
- 3. Cut out the drive motor cover with nipper and remove it from the base plate.
- 4. Disconnect all the lead wires from the drive motor.
- 5. Remove screws 1) securing the drive motor to the cavity.
- 6. Take out the drive motor.
- 7. When replacing the drive motor, be sure to remount it in the correct position.





#### **4-9 Replacement of Control Circuit Board**

- Be sure to ground any static electric charge in you body and never touch the touch control circuitry.
- 1. Remove 3 screws securing control panel Ass'y to oven front.
- 2. Remove screws holding control panel bracket '7' to control panel '1'.
- 3. Disconnect film connector from PCBoard assembly '9'.
- 4. Remove 3 screws securing PCB Ass'y.
- 5. Pull out membrane'4', window display'5' and door button'2'.

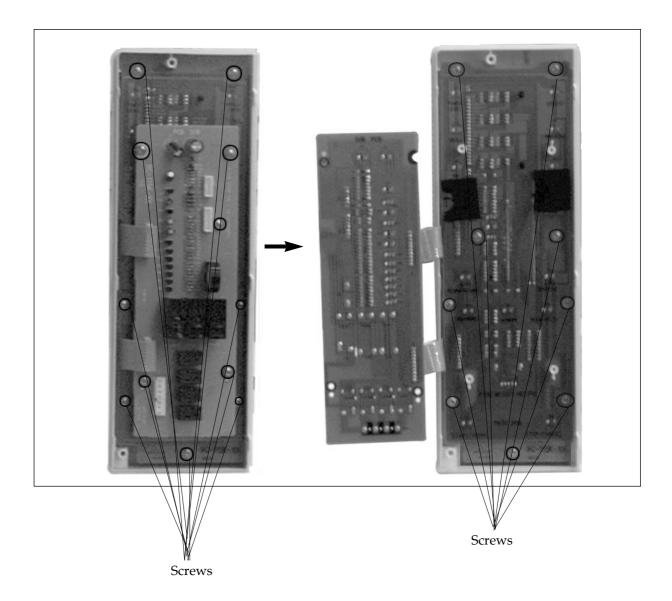


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## **4-6 Replacement of Control Circuit Board**

#### **4-6-1 Removal of Control Box Assembly**

- 1. Be sure to disclyarge any static electricity from your body, and avoid touching the "Touch control" clrcuitry.
- 2. Disconnect the connectors from the control circuit board.
- 3. Remove screws securing the control circuit bord.
- 4. Lift up the control circuit board from right side and remove the hooks holding the contol circuit board to the box assembly.



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## 5. Alignment and Adjustments

#### **PRECAUTION**

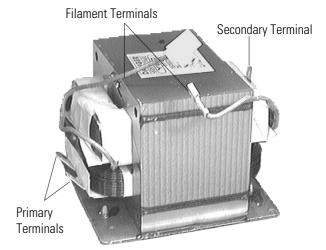
- 1. High voltage is present at the high voltage terminals during any cook cycle.
- 2. It is neither necessary nor advisable to attempt measurement of the high voltage.
- 3. Before touching any oven components or wiring, always unplug the oven from its power source and discharge the high voltage capacitor.

#### 5-1 High Voltage Transformer

- 1. Remove connectors from the transformer terminals and check continuity.
- 2. Normal resistance readings are as follows:

Secondary .......Approx. 66W
Filament .....Approx. 0W
Primary .....Approx. 1.250W

(Room temperature =  $20^{\circ}$ C)



#### **5-2 Low Voltage Transformer**

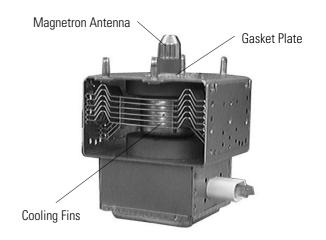
- 1. The low voltage transformer is located on the control circuit board.
- 2. Remove the low voltage transformer from the PCB Ass'y and check continuity.
- 3. Normal resistor reading is shown in the table.

L.V.T SPEC. : SLV-105E			
Terminals	Resistance		
1~2(Input)	290Ω		
3~4(Output)	$4.0\Omega$		
5~6(Output)	1.0Ω		

#### 5-3 Magnetron

Continuity checks can indicate only an open filament or a shorted magnetron. To diagnose an open filament or shorted magnetron:

- 1. Isolate the magnetron from the circuit by disconnecting its leads.
- 2. A continuity check across the magnetron filament terminals should indicate one ohm or less.
- 3. A continuity check between each filament terminal and magnetron case should read open.



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#### 5-4 High Voltage Capacitor

- 1. Check continuity of the capacitor with the meter set at the highest resistance scale.
- 2. Once the capacitor is charged, a normal capacitor shows continuity for a short time, and then indicates  $9M\Omega$ .
- 3. A shorted capacitor will show continuous continuity.
- 4. An open capacitor will show constant  $9M\Omega$ .
- 5. Resistance between each terminal and chassis should read infinite.

#### 5-5 High Voltage Diode

- 1. Isolate the diode from the circuit by disconnecting its leads.
- 2. With the ohm-meter set at the highest resistance scale, measure across the diode terminals. Reverse the meter leads and read the resistance. A meter with 6V, 9V or higher voltage batteries should be used to check the front-to back resistance of the diode (otherwise an infinite resistance may be read in both directions). The resistance of a normal diode will be infinite in one direction and several hundred  $K\Omega$  in the other direction.

#### 5-6 Main Relay and Power Control Relay

- 1. The relays are located on the PCB Ass'y. Isolate them from the main circuit by disconnecting the leads.
- 2. Operate the microwave oven with a water load in the oven. Set the power level set to high.
- 3. Check continuity between terminals of the relays after the start pad is pressed.

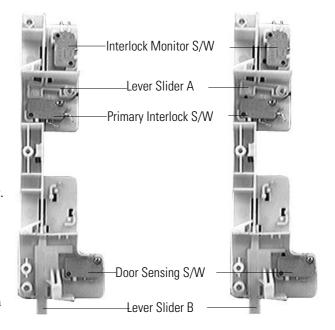
#### 5-7 Adjustment of Primary Switch, Door Sensing Switch and Monitor Switch

#### **Precaution**

For continued protection against radiation hazard, replace parts in accordance with the wiring diagram and be sure to use the correct part number for the following switches: Primary and door sensing switches, and the interlock monitor switch (replace all together). Then follow the adjustment procedures below. After repair and adjustment, be sure to check the continuity of all interlock switches and the interlock monitor switch.

- 1. When mounting Primary switch and Interlock Monitor switch to Latch Body, consult the figure.
  - **NOTE**: No specific adjustment during installation of Primary switch and Monitor switch to the latch body is necessary.
- 2. When mounting the Latch Body to the oven assembly, adjust the Latch Body by moving it so that the oven door will not have any play in it. Check for play in the door by pulling the door assembly. Make sure that the latch keys move smoothly after adjustment is completed. Completely tighten the screws holding the Latch Body to the oven assembly.
- Reconnect to Monitor switch and check the continuity of the monitor circuit and all latch switches again by following the components test procedures.
- 4. Confirm that the gap between the switch housing and the switch actuator is no more than 0.5mm when door is closed.

	Door Open	Door Closed
Primary switch	8	0
Monitor switch (COM-NC)	0	∞
Monitor switch (COM-NO) Door Sensing S/W	∞ ∞	0



(Door Close Condition)

(Door Open Condition)

5-2 Samsung Electronics

#### 5-8 Output Power of Magnetron

## CAUTION MICROWAVE RADIATION

PERSONNEL SHOULD NOT ALLOW EXPOSURE TO MICROWAVE RADIATION FROM MICROWAVE GENERATOR OR OTHER PARTS CONDUCTING MICROWAVE ENERGY.

The output power of the magnetron can be measured by performing a water temperature rise test. Equipment needed:

- \* Two 1-liter cylindrical borosilicate glass vessel (Outside diameter 190 mm)
- \* One glass thermometer with mercury column

NOTE: Check line voltage under load. Low voltage will lower the magnetron output. Make all temperature and time tests with accurate equipment.

- 1. Fill the one liter glass vessel with water.
- 2. Stir water in glass vessel with thermometer, and record glass vessel's temperature ("T1", 10±1 °C).
- 3. After moving the water into another glass vessel, place it in the center of the cooking tray. Set the oven to high power and operate for 48seconds exactly. (1.5 seconds included as a holding time of magnetron oscillation:)
- 4. When heating is finished, stir the water again with the thermometer and measure the temperature ("T2").
- 5. Subtract T1 from T2. This will give you the water temperature rise. ( $\Delta T$ )
- 6. The output power is obtained by the following formula;

$$Output\ Power = \frac{4.187 \times 1000 \times \Delta T + 0.88 \times Mcx(T_2 - T_0)}{46.5} \\ \frac{46.5 : \ Heating\ Time\ (sec)}{4.187 : \ Coefficient\ for\ Water} \\ \frac{\Delta T : \ Temperature\ Rise\ (T_2 - T_1)}{Mc : \ Cylindrical\ borosilicate\ glass\ weight} \\ To : \ Room\ temperature.$$

7. Normal temperature rise for this model is 9°C to 11°C at 'HIGH'.

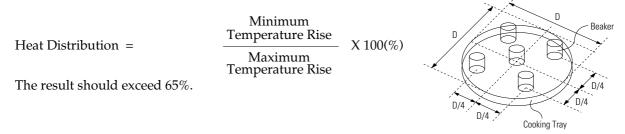
NOTE 1: Variations or errors in the test procedure will cause a variance in the temperature rise. Additional power test should be made if temperature rise is marginal.

NOTE 2: Output power in watts is computed by multiplying the temperature rise (step 5) by a factor of 90 times the of centigrade temperature.

#### 5-9 Microwave Heat Distribution - Heat Evenness

The microwave heat distribution can be checked indirectly by measuring the water temperature rise at certain positions in the oven:

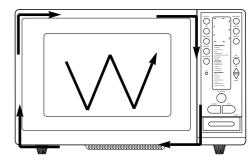
- 1. Prepare five beakers made of 'Pyrex', having 100 milliliters capacity each.
- 2. Measure exactly 100milliliters off water load with a measuring cylinder, and pour into each beaker.
- 3. Measure the temperature of each water load. (Readings shall be taken to the first place of decimals.)
- 4. Put each beaker in place on the cooking tray as illustrated in figure below. Start heating.
- 5. After heating for 2 minutes, measure the water temperature in each beaker.
- 6. Microwave heat distribution rate can be calculated as follows:



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## 5-10 Procedure for Measurement of Microwave Energy Leakage

- 1) Pour 275±15cc of 20±5°C(68±9°F) water in a beaker which is graduated to 600cc, and place the beaker in the center of the oven.
- 2) Start to operate the oven and measure the leakage by using a microwave energy survey meter.
- 3) Set survey meter with dual ranges to 2,450MHz.
- 4) When measuring the leakage, always use the 2 inch spacer cone with the probe. Hold the probe perpendicular to the cabinet door. Place the spacer cone of the probe on the door and/or cabinet door seam and move along the seam, the door viewing window and the exhaust openings moving the probe



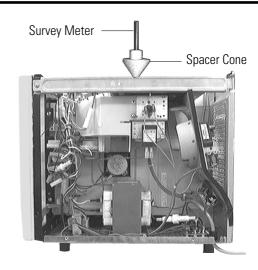
in a clockwise direction at a rate of 1 inch/sec. If the leakage testing of the cabinet door seam is taken near a corner of the door, keep the probe perpendicular to the areas making sure that the probe end at the base of the cone does not get closer than 5cm to any metal. If it gets closer than 5cm, erroneous readings may result.

5) Measured leakage must be less than 4mW/cm<sup>2</sup>, after repair or adjustment.

Maximum allowable leakage is 5mW/cm<sup>2</sup>. 4mW/cm<sup>2</sup> is used to allow for measurement and meter accuracy

#### 5-11 Check for Microwave Leakage

- 1. Remove the outer panel.
- 2. Pour 275±15cc of 20±5 °C(68±9 °F) water in a beaker which is graduated to 600cc, and place the beaker in the center of the oven.
- 3. Start the oven at the highest power level.
- 4. Set survey meter dual ranges to 2,450MHz.
- 5. Using the survey meter and spacer cone as described above, measure arnear the opening of magnetron, the surface of the air guide and the surface of the wave guide as shown in the following photo.( but avoid the high voltage components.) The neading should be less than 4mW/cm<sup>2</sup>.



#### **WARNING**

AVOID THE HIGH VOLTAGE COMPONENTS.

#### 5-12 Note on Measurement

- 1) Do not exceed the limited scale.
- 2) The test probe must be held on the grip of the handle, otherwise a false reading may result when the operator's hand is between the handle and the probe.
- 3) When high leakage is suspected, do not move the probe horizontally along the oven surface; this may cause damage to the probe.
- 4) Follow the recommendation of the manufacturer of the microwave energy survey meter.

### 5-13 Leakage Measuring Procedure

- 5-13-1 Record keeping and notification after measurement
  - 1) After adjustment and repair of a radiarion preventing device, make a repair record for the measured values, and keep the data.
  - 2) If the radiation leakage is more than 4 mW/cm² after determining that all parts are in good condition, functioning properly and the identical parts are replaced as listed in this manual notift that fact to;

#### CENTRAL SERVICE CENTER

5-13-2 At least once a year have the microwave energy survey meter checked for accuracy by its manufacturer.

5-4 Samsung Electronics

## 6. Troubleshooting

#### **PRECAUTION**

- 1. CHECK GROUNDING BEFORE CHECKING FOR TROUBLE.
- 2. BE CAREFUL OF THE HIGH VOLTAGE CIRCUIT.
- 3. DISCHARGE THE HIGH VOLTAGE CAPACITOR.
- 4. WHEN CHECKING THE CONTINUITY OF THE SWITCHES OR TRANSFORMER, DISCONNECT ONE LEAD WIRE FROM THESE PARTS AND THEN CHECK CONTINUITY WITHOUT THE POWER SOURCE ON. TO DO OTHERWISE MAY RESULT IN A FALSE READING OR DAMAGE TO YOUR METER.
- 5. DO NOT TOUCH ANY PART OF THE CIRCUIT OR THE CONTROL CIRCUIT BOARD, SINCE STATIC DISCHARGE MAY DAMAGE IT. ALWAYS TOUCH GROUND WHILE WORKING ON IT TO DISCHARGE ANY STATIC CHARGE BUILT UP.

#### **6-1 Electrical Malfunction**

SYMPTOM	CAUSE	CORRECTIONS	
Oven is dead. Fuse is OK. No display and no operation at all.	Open or loose lead wire harness     Open thermal cutout (Magnetron)     Open low voltage transformer     Defective Ass'y PCB	Check fan motor when thermal cutout is defective.  Check Ass'y PCB when LVT is defective.	
No display and no operation at all. Fuse is blown.	Shorted lead wire harness     Defective primary latch switch (NOTE 1)     Defective monitor switch (NOTE1)     Shorted HVCapacitor     Shorted HVTransformer (NOTE2)	Check adjustment of primary, interlock monitor, power relay, door sensing switch.	
	NOTE 1: All of these switches must be repl (refer to adjustment instructions) Check continuity of power relay co relay also. NOTE 2: When HVTransformer is replaced,	ntacts and if it has continuity, replace power	
Oven does not accept key input (Program)	Key input is not in-Sequence     Open or loose connection of membrane key pad to Ass'y PCB     Shorted or open membrane panel     Defective Ass'y PCB	Refer to operation procedure.  Replace PCB main.	
Timer starts countdown but no microwave oscillation. (No heat while oven lamp and fan motor turn on.)	1. Off-alignment of latch switches 2. Open or loose connection of high voltage circuit especially magnetron filament circuit  NOTE: Large contact resistance will bring lower magnetron filament voltage and cause magnetron to lower output and/or intermittent oscillation. 3. Defective high voltage components H.V.Transformer H.V.Capacitor H.V.Diode,H.V.Fuse Magnetron 4. Open or loose wiring of power relay 5. Defective primary latch switch 6. Defective power relay or Ass'y PCB	Adjust door and latch switches.  Check high voltage component according to component test procedure and replace if it is defective.  Replace PCB main.	

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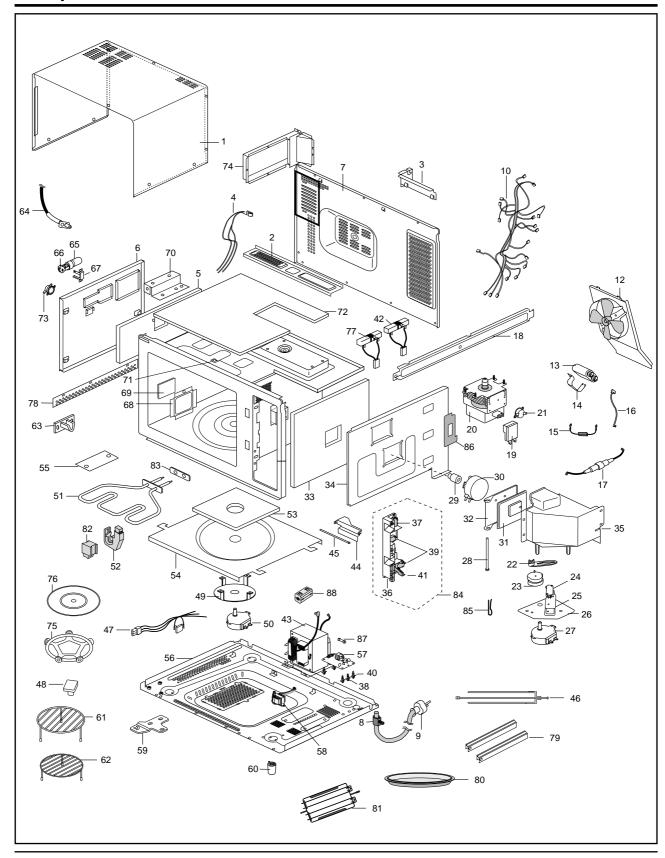
## **6-1 Electrical Malfunction(continued)**

SYMPTOM	CAUSE	CORRECTIONS
Oven lamp and fan motor turn on	Misadjustment or loose wiring of primary latch switch     Defective primary latch switch	Adjust door and latch switches.
Oven can program but timer does not start.	Open or loose wiring of secondary interlock switch     Off-alignment of primary interlock     Defective secondary interlock S/W	Adjust door and interlock switches.
Microwave output is low;. Oven takes longer time to cook food.	Decrease in power source voltage.     Open or loose wiring of magnetron filament circuit. (Intermittent oscillation))     Aging of magnetron	Consult electrician.
Fan motor turns on when plugged in	Loose wiring of door sensing switch	Check wire of door sensing switch.
Oven does not operate and return to the plugged in mode.	Defective Ass'y PCB	Replace PCB main.
Loud buzzing noise can be heard.	Loose fan and fan motor     Loose screws on H.V.Transformer     Shorted H.V.Diode	Tighten screws of fan motor. Tighten screws of H.V.Transformer. Replace H.V.Diode.
Turntable motor does not rotate.	Open or loose wiring of turntable motor.     Defective turntable motor.	Check the wire of turntable motor Replace turntable motor.
Oven stops operation during cooking	Open or loose wiring of primary interlock switch     Operation of thermal cutout(Magnetron)	Adjust door and latch switches.
Sparks	Metallic ware or cooking dishes touching on the oven wall.     Ceramic ware trimmed with gold or silver powder also causes sparks.	Inform the customer.  Do not use any type of cookware with metallic trimming.
Uneven cooking	Uneven intensity of microwave due to its characteristics.	Wrap thinner parts of the food with aluminum foil. Use plastic wrap or cover with a lid. Stir once or twice while cooking foods such as soup, cocoa, or milk.
Noise from the turntable motor when it starts to operate.	Noise may result from the motor.	Replace turntable motor.

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## 7. Exploded Views and Parts List

## **7-1 Exploded Views**



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#### 7-2 Main Parts List

Ref. No.	Parts No.	Description	Specification	Q'ty	Remarks
1	DE92-90315A	ASSY-DAMPER COVER	RE-1280	1	
2	DE61-30100A	SUPPORTER-BACK	SECC,TO.6	1 1	
3	DE92-90053A	ASSY-COVER AIR	RE-1200/1280/1270	1 1	
4	DE39-40453E	WIRE HARNESS-B	230V,RE-1280(SAW),AMF0	1 1	
5	DE62-90016B	ADIABATIC-L	EGF-E3019-PBS,T10,W180,L180,AL		
6	DE71-60316A	COVER-ADIABATIC-L	SBHG1-M,T0.5	1 1	COVE/L
7	DE92-90179A	ASSY-BACK PANEL	RE-1280	1 1	0012,2
8	DE65-20022A	BUSHING CORD	IC002	1 1	
9	DE39-20075G	ASSY POWER CORD	UD13A1,230V15A,L1500,BLK,CE102	1 1	
10	DE39-40229E	WIRE HARNESS-A	230V,RE-1280(SAW),AMF0		
12	DE31-10020A	MOTOR-FAN	AMM90-004ATEB		
13	2501-000234	C-OIL	SCH-2121134B1,1.13F,2100VAC,54X35	1 1	
14	DE61-50266A	BRACKET-HVC	SECC,TO.6	1 1	
15	DE59-40001A	DIODE-H.V	HVR-1X-32B-12	1 1	
16	DE39-30102A	WIRE LEAD-B	L540,2GA2	1 1	
17	DE91-70061A	ASSY-H.V.FUSE	THV060T-0800-H,5KV/0/8A WH	1 1	
18	DE61-30099A	SUPPORTER-MGT	SECC,TO.8		
19	DE27-10020A	COIL-MC CHOKE	TC,101	1 1	
20	OM75PH(10)ESS	ASSY-MAGNETRON	OM75PH(10)ESSS	1 1	
21	DE47-20101A	THERMOSTAT	PW2N(160/60)		MGT
22	DE66-90028A	LEVER-DAMPER	POM-KEP,44G	1 1	
23	DE72-20014A	CAM	POM(KEP,F20-02),RE-909CG	1 1	
24	DE34-20026A	SWITCH-MICRO	VP331A-0D(PT2	1 1	
25	DE70-90016A	SHEET-INSK K	POLYESTER,TO.5,W45,L24	1 1	
26	DE61-50231A	BRACKET-DAMPER	SECC,TO.8	1 1	
27	DE31-10052A	MOTOR-SYNCHRONOUS	M2LB49ZR02,DAMPER-MOTOR		
28	DE60-60026A	PIN-DAMPER	MSWR3		
29	DE67-60037A	COUPLER-BARBECUE	AL	1 1	
30	DE31-10057A	MOTOR-SYNCHRONOUS	MULJ24ZR03,SPIT-MOTOR	1 1	
31	DE72-40034A	DAMPER-SILICON	SILICONE	1 1	
32	DE72-40037A	DAMPER-PLATE	SECC,TO.6	1 1	
33	DE62-90015B	ADIABATIC-R	EGF-E3019-PBS,T15,W346,L282,AL	1 1	
35	DE71-60216A	COVER-DAMPER	NYLON#66-2411GF,143.7G	1 1	
34	DE71-60230D	COVER-ADIABATIC-R	SBHG1-M,T0.5	1 1	
35	DE71-60216A	COVER-DAMPER	NYLON#66-2411GF,143.7G	1 1	
36	DE66-40027A	BODY-LATCH	NULON#662411GF6,HB,NTR	1 1	
37	3405-000175	SWITCH-MICRO	250V,15A,200gf,SPST-NO	1	
38	DE61-30127A	SUPPORTER-PCB	DANC-6N	1	
39	3405-000178	SWITCH-MICRO	250V,15A,200gf,SPST-NO	2	
40	DE61-30129A	SUPPORTER-PCB	DASS-T9N	4	
41	DE66-90062A	LEVER-DOOR	NYLON#66,2411GF6,HB,NTR	1 1	
42	DE91-70100A	ASSY-RESISTOR	RE-1280(SAW),10W,30-J	1	
43	DE26-10033A	TRANS-H.V	Y247STC,230V,50HZ,AC2260/3.3V	1 1	A
44	DE61-50232A	BRACKET-DOOR LEVER	SECC,T1.5	1 1	
45	DE60-60026A	PIN-DAMPER	MSWR3	1 1	
46	DE72-80023B	SHAFT-BARBECUE	RE-909CG	1 1	
47	DE39-40117A	WIRE HARNESS-C	RE-909CG	1 1	
48	DE92-90247A	ASSY-COUPLER	RE-1270/1280,EUROPE	1 1	
49	DE61-50236A	BRACKET-COVER MOTOR	SECC,TO.8,RE-909CG	1	
50	DE31-10039A	MOTOR-SYNCHRONOUS	MVLB51ZR11,220/240V50H	1	
51	DE47-70016E	HEATER-GRILL	230V,1300W,390HM,D7.0,RE-1280,	1 1	
52	DE61-30140A	SUPPORTER-HEATER	ALUMINA,10G,RE-650	1 1	
53	DE62-90014B	ADIABATIC-L	EGF-E3019-PBS,T15,W351,L136,AL	1 1	
54	DE71-60229D	COVER-ADIABATIC-L	SBHG1-M,T0.5	1 1	
55	DE70-40073A	PLATE-CEILING	MICA-SHEET,T0.5	1	
56	DE80-10049A	BASE-PLATE	SBHG1-R,T1.0	1	
57	DE91-40091A	ASSY-NOISE FILTER	RE-1200,250V,15A,1200	1	
58	DE26-20084A	TRANS-L.V	RE-1280STC,230V,50HZ,AC16/3V,R	1	
59	DE61-80065A	HINGE-LOWER	SBC1,T3.0,DARCON	1	
60	DE61-40029A	FOOT	DASF-330,RE-909CG	4	

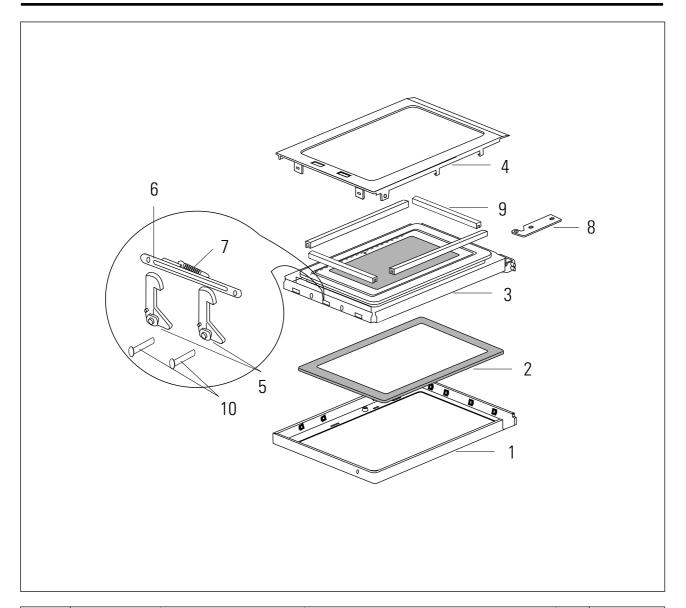
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## 7-2 Main Parts List

Ref. No.	Parts No.	Description	Specification	Q'ty	Remarks
61	DE92-90019B	ASSY-RACK WIRE	CE124CF,HIGH,MAGENTA	1	
62	DE92-90019S	ASSY-WIRE RACK	CE124CF,LOW	1	
63	DE61-90094A	HOLDER-BARBECUE	PTFE,9G	1	
64	DE32-10013A	SENSOR-THERMISTOR	PT-312-K2	1	
65	4713-000168	LAMP-INCANDESCENT	230V,-,25W,ORG	1	
66	DE47-40021A	SOCKET-LAMP	E/14(22.225)	1	A
67	DE61-50234A	BRACKET-LAMP	SECC,TO.8	1	
68	DE71-60267A	COVER-LAMP	STS304,T0.4	1	
69	DE67-40066A	GLASS-PLATE	TEMP-GLASS,T3.2	1	
70	DE61-50282E	BRACKET-HINGE U	SBHG1-A,T1.2	1	
71	DE61-70060A	SPRING-PLATE	SK-5,T0.5	1	
72	DE62-90028C	ADIABATIC-UPPER	T6,W399,L353.8,CERAMIC,WOOL	1	C/UPP
73	DE47-20044A	THERMOSTAT	PW-2N,150/60,BKT23.8MM	1	GRILL
74	DE92-90100B	ASSY-GUIDE AIR	RE-1280/1270	1	
75	DE92-90072A	ASSY-BASE ROLLER	RE-909CG	1	
76	DE74-20045A	TRAY-CERAMIC	RE-909CG	1	
77	DE93-90038A	ASSY-B/RESISTOR	FX175Z-D	1	
78	DE61-50238A	BRACKET-PLATE	SECC.TO.6	1	
79	DE64-20045A	HANDLE-BARBECUE	TEMPERED,SPRAY,BLK	2	A
80	DE74-20107A	TRAY-BROILER	AL,T0.8,345,345,PI345,ENAMEL,S	1	A
81	DE92-90009A	ASSY-SPIT RACK	CE124CF	1	
82	DE61-30141A	SUPPORTER-HEATER(B)	ALUMINA,5G,RE-650	1	
83	DE63-20019A	GASKET-HEATER	BRASS-WIRE	1	
84	DE93-20013C	ASSY BODY LATCH	RE-1280(SAW)	1	
85	DE60-60017A	PIN-WIRE	MSWR3,PI1.0	1	
86	DE61-50165A	BRACKET-HEATER	MICA-SHEET,T0.5,W35,L91.5	1	
87	3601-000438	FUSE-FERRULE	250V,15A,SB,CERAMIC,6.4X31.8MM	1	
88	DE73-90027A	FERRITE-CORE	NI-ZN,T13.8,W21.0,L28.0,BNF-14	1	

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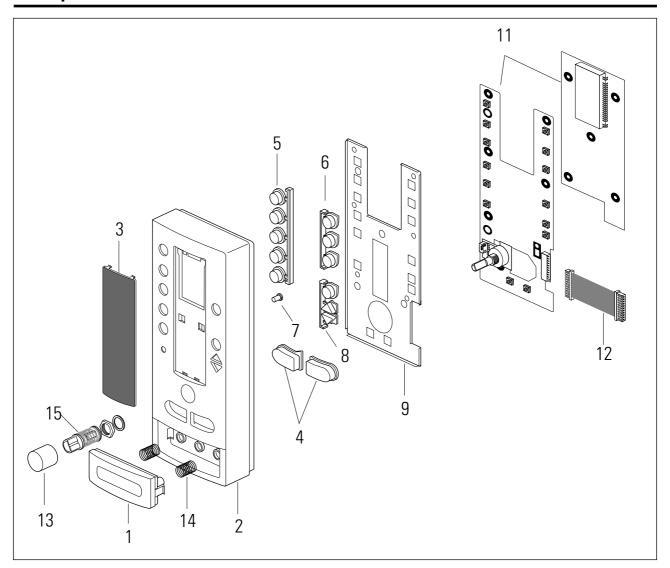
## 7-3 Exploded View & Parts List - Door Parts



Ref. No.	Parts No.	Description	Specification	Q'ty	Remarks
1	DE64-40045A	DOOR-A	PC-LEXAN141,RP-WH-01-K,310G,RE	1	
2	DE67-20029E	SCREEN-DOOR(B)	TEMP,GLASS,T3.2XW313XL435,VITA	1	
3	DE92-50037A	ASSY DOOR-E	SILICON,BONDING	1	
4	DE64-40103A	DOOR-C	PBT-1500G,158G	1	
5	DE64-40124A	DOOR-KEY	NYLON#66-2411GF,5.1G	2	
6	DE92-90138A	ASSY-BRACKET SLIDER	RE-909CG	1	
7	DE61-70057B	SPRING-KEY	HSWR,PI1.2,D5.8,L47	1	
8	DE92-90052A	ASSY-HINGE-U	SBC1,T2.0	1	
9	DE73-90018A	FERRITE	DB-867CPE,T4.1,W7.0,L1310	1	
10	DE60-60021A	PIN-DOOR	MSWR,ZPC3	2	

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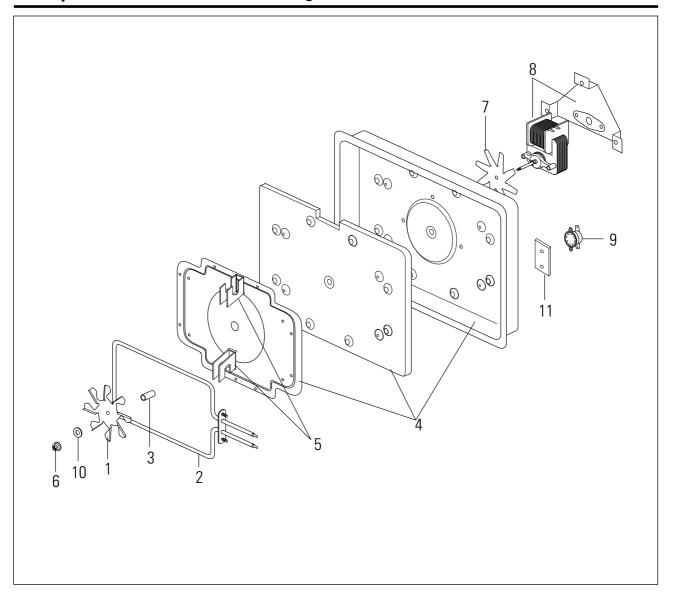
## 7-4 Exploded View & Parts List - Control Parts



Ref. No.	Parts No.	Description	Specification	Q'ty	Remarks
1	DE66-20025A	BUTTON-PUSH	PC-LEXAN#141,RP-WH-01-K,19G,RE	1	
2	DE72-70051M	CONTROL-PANEL	PC(LEXAN#141),RP-WH-01-K,230G	1	
3	DE67-40027H	WINDOW-DISPLAY	ACRYL,SMOG,40G,AMFO	1	
4	DE66-20041A	BUTTON-CANCEL	PC-LEXAN#141,RP-WH-01-K,6G,RE	2	
5	DE66-20026A	BUTTON-SELECT-L	PC-LEXAN#141,RP-WH-01-K,16G	1	
6	DE66-20042A	BUTTON-SELECT-R	PC-LEXAN#141,RP-WH-01-K,10G	1	
7	DE66-20080A	BUTTON-CLOCK	PC-LEXAN#141,RP-WH-01-K,1G,RE	1	
8	DE66-20024A	BUTTON-MORE	PC-LEXAN#141,RP-WH-01-K,7G,RE	1	
9	DE61-50072A	BRACKET-PANEL	SECC,T0.8,W107,L286.35	1	
12	DE39-30091A	WIRE LEAD-PCB(B)	L60,RE-1280(SAW),AMF0	1	
13	DE64-10038C	KNOB-VOLUME	PC(LEXAN#141),WHT,5G,CIRCLE,PR	1	
14	DE61-70076A	SPRING-BUTTON	HSWR,PI0.6	2	
15	DE34-20030A	SWITCH-VOLUME	4M17736	1	
16	DE93-30066M	ASSY CONTROL-BOX	CE124CF(SAW),AMFO	1	

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## 7-5 Exploded View & Parts List - Casing Parts



Ref. No.	Parts No.	Description	Specification	Q'ty	Remarks
1	DE31-90020A	BLADE-FAN	ALSTAR,T0.6,W250,L250	1	
2	DE47-70028B	HEATER-CONVECTION	D8,230V6.1A,1400W,RE-1280	1	
3	DE72-30014A	BUSH-GEAR MOTOR	SWRM3,ID5,OD7,ZPC3	1	
4	DE92-90212C	ASSY-HEATER COVER	RE-1280,NEW,SYSTEM,VI	1	
5	DE61-50192A	BRACKET-HEATER-B	STS430,T0.8,W28.5,L65.4,RE-128	2	
6	DE60-30016B	NUT-FLANGE	M4,MSWR10,FEFN	3	BL-FAN/HEATER
7	DE31-90019A	BLADE-FAN	SECC,TO.6	1	
8	DE91-50031A	ASSY-CONV.MOTOR	AMM90-004AUEA,230V0.33A	1	
9	DE47-20044A	THERMOSTAT	PW-2N,150/60,BKT23.8MM	1	
10	DE60-40026A	WASHER-PLAIN	ID5.5,0D12,T1.0,SBC1	1	
11	DE62-10014A	INSULATION-TCO	T2.0,W34,L26,YEL	1	
12	DE92-90079G	ASSY-CASING	RE-1270/1280,230V,NEW,SYSTEM,V	1	

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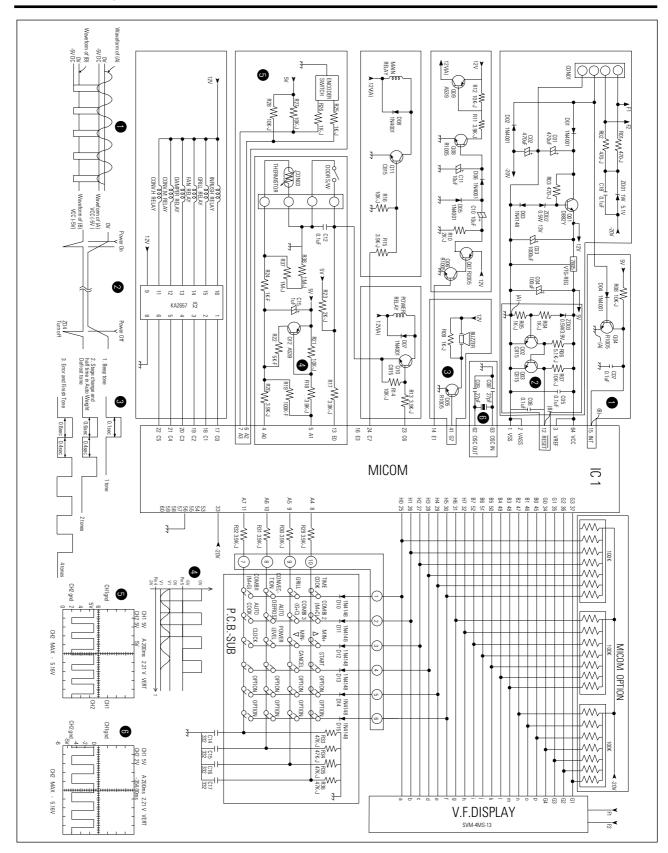
## 7-6 Parts List - Standard Parts

Parts No.	Description	Specification	Q'ty	Remarks
DE60-10012A	SCREW-TAP TITE	TH,+,3,M4,L10,SWR10,ZPC2,T00TH	1	H.V.D
DE60-10012A	SCREW-TAP TITE	TH,+,3,M4,L10,SWR10,ZPC2,T00TH	1	N/FILT
DE60-10013A	SCREW-ASSY TAP	TH,2S,4,L12,MSWR3,ZPC3,FIBER	6	BASE-P
DE60-10016A	SCREW-ASSY MACHINE	TH,4,L10,STS43	1	SENSOR
DE60-10032A	SCREW-TH	TH,+,M4,L8,STS304	2	BAR-HL
DE60-10045A	SCREW-TAP PH	PH,M3,L6,FEFZY	2	TCO-MG
DE60-10052A	SCREW-TAP PH	PH,M4,L8,FEFZY	1	B/U-HI
DE60-10052A	SCREW-TAP PH	PH,M4,L8,FEFZY	1	FR-PAN
DE60-10052A	SCREW-TAP PH	PH,M4,L8,FEFZY	2	TCO-GR
DE60-10053A	SCREW-TAP PH	PH,M4,L10,FEFZY	2	BAR-MO
DE60-10061A	SCREW-TAP TH	TH,M4,L8,STS	2	G/LAMP
DE60-10061A	SCREW-TAP TH	TH,M4,L8,STS	2	PL-CEI
DE60-10063A	SCREW-TAP TH	TH,M4,L12,FEFN	1	HI-LOW
DE60-10063A	SCREW-TAP TH	TH,M4,L12,FEFN	4	OUT-PN
DE60-10066A	SCREW-TAP TH	TH,M4,L8,FEFZY,2-SLOT	4	B/GE-M
DE60-10069A	SCREW-TAP TH	TH,M4,L10,FRFZY	1	A-C-AI
DE60-10069A	SCREW-TAP TH	TH,M4,L10,FRFZY	2	AIR-GU
DE60-10069A	SCREW-TAP TH	TH,M4,L10,FRFZY	2	B/HTR
DE60-10069A	SCREW-TAP TH	TH,M4,L10,FRFZY	2	B/LAMP
DE60-10069A	SCREW-TAP TH	TH,M4,L10,FRFZY	2	C/AD-L
DE60-10069A	SCREW-TAP TH	TH,M4,L10,FRFZY	2	C/AD-R
DE60-10069A	SCREW-TAP TH	TH,M4,L10,FRFZY	8	CASING
DE60-10069A	SCREW-TAP TH	TH,M4,L10,FRFZY	4	DAMPER
DE60-10080A	SCREW-WASHER	M5,L12,2S	4	HVT
DE60-10082H	SCREW-A	2S-4X12,T00THED	1	A-B-RE
DE60-10082H	SCREW-A	2S-4X12,T00THED	1	A-REST
DE60-10082H	SCREW-A	2S-4X12,T00THED	2	B-PLTE
DE60-10082H	SCREW-A	2S-4X12,T00THED	1	B/HVC
DE60-10082H	SCREW-A	2S-4X12,T00THED	2	B/U-HI
DE60-10082H	SCREW-A	2S-4X12,T00THED	11	BACK-P
DE60-10082H	SCREW-A	2S-4X12,T00THED	2	BD-LAT
DE60-10082H	SCREW-A	2S-4X12,T00THED	3	CON-BX
DE60-10082H	SCREW-A	2S-4X12,T00THED	1	MO-FAN
DE60-10082H	SCREW-A	2S-4X12,T00THED	5	OUT-PN
DE60-10082H	SCREW-A	2S-4X12,T00THED	2	SUP-MG
DE60-10082H	SCREW-A	2S-4X12,T00THED	1	W-H-A
DE60-20014A	BOLT-FLANGE	M5,L10,MSWR3,FEFZY	2	LOW-HI
DE60-20014A	BOLT-FLANGE	M5,L10,MSWR3,FEFZY	2	UPP-HI
DE60-30015A	NUT-FLANGE	M5,P0.8,MSWR10,FEFZY	4	MGT
DE60-30016A	NUT-FLANGE	M4,MSWR10	2	BR-HAN
DE60-30016A	NUT-FLANGE	M4,MSWR10	2	GRIL-H
DE60-30016A	NUT-FLANGE	M4,MSWR10	1	SENSOR
DE60-10045A	SCREW-TAP PH	PH,M3,L6,FEFZY	2	-
DE60-10066A	SCREW-TAP TH	TH,M4,L8,FEFZY,2-SLOT	3	-
DE60-10122A	SCREW-TAP TH	TAP,TH,2-4X8,FE,FN	2	-
DE60-10047A	SCREW-TAP PH	PH,M3,L16,FEFZY	2	-
DE60-10052A	SCREW-TAP PH	PH,M4,L8,FEFZY	2	-
DE60-10069A	SCREW-TAP TH	TH, M4,L10,FRFZY	3	- D /F ^ D T
DE60-10012A	SCREW-TAP TITE	TH,+,3,M4,L10,SWR10,ZPC2,T00TH	1	P/EART
DE60-10069A	SCREW-TAP TH	TH,M4,L10,FRFZY	2	- [00]
DE60-10072A	SCREW-TAP TH	TH,M4,L16,FEFZY,2-SLOT	4	FOOT
DE60-10082H	SCREW-A	2S-4X12,TOOTHED	2	COV/B
DE60-10088A	SCREW-TAP PH	PH,M3,L8,FEFZY,PLAIN	14	-

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## 8. P.C.B Diagrams

#### 8-1 P.C.B Diagrams



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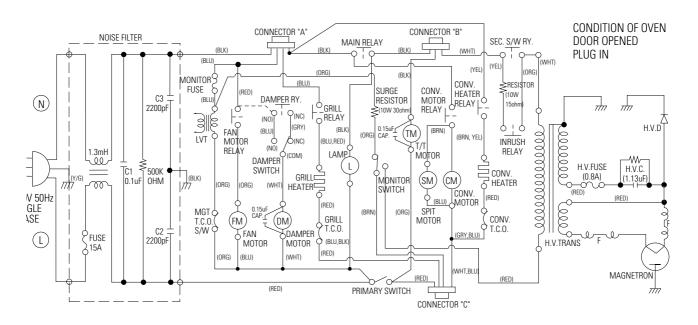
## 8-2 P.C.B Parts List

P16	No.	Parts No.	Description	Specification	Q'ty	Remarks
P3   3501-000256   RELAY-POWER   12V16A15mS.15mS   2   CONV-H_CONVER   12V16A15mS.15mS   2   CONVER   12V16A15mS.15mS   12V16A15mS.15mS.15mS   12V16A15mS.15mS   12V16A15mS.15mS.15mS   12V16A15mS.15mS.15mS   12V1		0502-000303			1	
P3   3501-000265   RELAY-POWER   12V16A15mS_15mS   2   GRILLINRUSH   12V16A15mS_15mS   2   MAIN POWER   12V16A15mS_15mS   2   MAIN POWER   12V16A15mS_15mS   2   MAIN POWER   12V16A15mS_15mS   1   RELAY   12V16A15mS_15mS_15mS   1   RELAY   12V16A15mS_15mS_15mS   1   RELAY   12V16A15mS_15mS_15mS_15mS_15mS_15mS_15mS_15mS_	P 2	3406-001031	SWITCH-ROTARY	10V,1mA,DP24T,18.3mm		ECD1
P3   3501-000268   RELAY-POWER   14   3501-000348   RELAY-POWER   12√, 156A, 15mS, 15mS   2   MAIN-POWER   14   3501-000348   RELAY-BED   12√, 156MV, 10A, 10mS, 5mS   1   RELAY   12√, 156MV, 10A, 10A, 10A, 10MS, 5mS   1   RELAY   12√, 156MV, 10A, 10A, 10A, 10A, 10A, 10A, 10A, 10A			RELAY-POWER	12V,-,16A,-,15mS,15mS		CONV-H,CONV-M
P4   3501-000315   CONNECTOR-HEADER   P5   3711-0008107   CONNECTOR-HEADER   P6   3711-0008107   CONNECTOR-HEADER   P7   3711-0008107   CONNECTOR-HEADER   P8   3711-000813   CONNECTOR-HEADER   P8   3711-001343   CONNECTOR-HEADER   P9   DE07-10052A   VF.DISPLAY   CONNECTOR-HEADER   P9   DE07-10052A   VF.DISPLAY		3501-000265	RELAY-POWER			GRILL,INRUSH
P5   3711-000617   CONNECTOR-HEADER   P7   3711-000607   CONNECTOR-HEADER   BOX.11P.1R.2.50mm,ANGLE.SN   1   CON06   CONNECTOR-HEADER   BOX.11P.1R.2.50mm,ANGLE.SN   1   CON02   CONNECTOR-HEADER   BOX.11P.1R.2.50mm,ANGLE.SN   1   CON02   CONNECTOR-HEADER   BOX.11P.1R.2.50mm,STRAIGHT.SN   1   CON02   CONNECTOR-HEADER   BOX.11P.1R.2.50mm,STRAIGHT.SN   1   CON02   CONDECTOR-HEADER   CONNECTOR-HEADER   CONNECTOR-HEADER   BOX.11P.1R.2.50mm,STRAIGHT.SN   1   CON02   CONDECTOR-HEADER   CONNECTOR-HEADER		3501-000265	RELAY-POWER	12V,-,16A,-,15mS,15mS	2	MAIN,POWER
F6   3711-000612		3501-000334			1	
P7   3711-000612   CONNECTOR-HEADER   P8   3711-001343   CONNECTOR-HEADER   NOWALL 1P, 1R, 3.4mm, STRAIGHT, SN   1   COND		3711-000315	CONNECTOR-HEADER		1	CON04
P8   3711-001343   CONNECTOR-HEADER   NOWALL 1,P1R,3 d/mm_STRAIGHT,AG   1   VFD		3711-000607	CONNECTOR-HEADER	BOX,11P,1R,2.50mm,ANGLE,SN	1	CON06
P9   DE07-10052A   V.F.DISPLAY   SVM-4MS13S,MW0,RE-1280   1   MICOM				BOX,11P,1R,2.5mm,STRAIGHT,SN	1	
P10   DE09-30158A   CMCU					1	
P11   DE13-20016A   IC-VOLT REGU   KA7805A,T0-220AB,1A_0/125C   1   ICO4					1	
P12   DE13-20016A   DE30-20016B   BUZZER   CBE2220BA_STICK   1   D03,009.D10,D11-D10-D100-D1100B-SWITCHING   P16   0402-001103   DIODE-RECTIFIER   T14,400V,1A,TS-1,TP   7   D03,009.D10,D11-D100-D100-SWITCHING   DIODE-ZENER   114/43A_13V,5%_1V,D0-41,TP   1   ZD02   D100-ZENER   114/43A_13V,5%_1V,D0-41,TP   1   ZD02   D10-ZENER   114/33A_13V,5%_1V,D0-41,TP   1   ZD01   D10-ZENER   D1					1	
P13   DE30-20016A   BUZZER   HOLDER-DIGITRON   DE61-90034D   HOLDER-DIGITRON   HOLDER-DIGITRON   DIODE-SWITCHING   10402-001103   DIODE-SWITCHING   114/48M,100V,200mA,D0-34,TP   7   D01,D02,D04,D05-11   17,400V,1A,TS-1,TP   7   D01,D02,D04,D05-11   17,400V,1A,TS-1,TP   7   D01,D02,D04,D05-11   17,400V,1A,TS-1,TP   7   D01,D02,D04,D05-11   17,400V,1A,TS-1,TP   1   ZD02   ZD02   DIODE-ZENER   114/433A,13V,5%,1W,D0-41,TP   1   ZD01   ZD02   ZD03   TR-SMALL SIGNAL   KSA539,PW,400mW,T0-92,TP,120-2   Q09,010   C04,005   TR-DIGITAL   KRC119M,NPN,400mW,7-04,70K,T0-92M,TP   4   Q02,003,006,008   C0504-001046   TR-DIGITAL   KRC119M,NPN,400mW,7-7K/10K,T0-92M,TP   1   Q07   Q02,003,006,008   C0504-001046   TR-DIGITAL   KRC119M,NPN,400MW,4.7K/10K,T0-92M,TP   1   Q07					1	
P15						
P15						BUZZER
P16						-
P17						D03,D09,D10,D11~D14
P18						D01,D02,D04,D05~D08
P19						
P20			=			
P21         0504-001045         TR-DIGITAL         KRC119M,NPN,400MW,4.7K/10K,TO-92M,TP         4         Q02,Q03,Q06,Q08           P22         0504-001046         TR-DIGITAL         KRA119M,PNP,400MW,4.7K/10K,TO-92M,TP         1         Q07           P23         2001-000042         R-CARBON         1KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R04,R05,R09,R27,I           P24         2001-000065         R-CARBON         4700HM,5%,1/4W,AA,TP,2.4X6.4MM         3         R01,R02,R03           P25         2001-000065         R-CARBON         10K0HM,5%,1/4W,AA,TP,2.4X6.4MM         5         R06,R07,R08,R12,I           P26         2001-000076         R-CARBON         10K0HM,5%,1/4W,AA,TP,2.4X6.4MM         2         R16,R21           P26         2001-000076         R-CARBON         1MOHM,5%,1/4W,AA,TP,2.4X6.4MM         4         R33,R34,R35,R36           P27         2001-000575         R-CARBON         2KOHM,5%,1/4W,AA,TP,2.4X6.4MM         2         R1,R13,R15,R17,R           P29         2001-000611         R-CARBON         3.9K0HM,5%,1/4W,AA,TP,2.4X6.4MM         5         R1,R13,R15,R17,R           P30         2004-000133         R-METAL         100Kohm,1%,1/4W,AA,TP,2.4X6.4mm         1         R19           P31         2201-00042         C-CERAMIC,DISC         25,F7,9.						
P22         0504-001046         TR-DIGITAL         KRA119M,PNP,400MW,4.7k/10K,T0-92M,TP         1         007           P23         2001-000042         R-CARBON         1KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R04,R05,R09,R27,I           P24         2001-000065         R-CARBON         4700HM,5%,1/4W,AA,TP,2.4X6.4MM         5         R04,R05,R09,R27,I           P25         2001-000065         R-CARBON         10K0HM,5%,1/4W,AA,TP,2.4X6.4MM         5         R06,R07,R08,R12,I           P26         2001-000076         R-CARBON         10K0HM,5%,1/4W,AA,TP,2.4X6.4MM         2         R16,R21           P27         2001-000432         R-CARBON         1MOHM,5%,1/4W,AA,TP,2.4X6.4MM         2         R16,R21           P28         2001-000675         R-CARBON         1MOHM,5%,1/4W,AA,TP,2.4X6.4MM         2         R16,R21           P29         2001-000611         R-CARBON         3.9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,I           P29         2001-000611         R-CARBON         3.9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,I           P30         2004-00133         R-METAL         100Kohm,1%,1/4W,AA,TP,2.4X6.4MM         5         R20,R29,R30,R31,I           P31         2004-000193         R-METAL         1Kohm,1/4,1/4W,A						
P23         2001-000042         R-CARBON         1K0HM,5%,1/4W,AA,TP,2.4X6.4MM         5         R04,R05,R09,R27,I           P24         2001-000062         R-CARBON         4700HM,5%,1/4W,AA,TP,2.4X6.4MM         3         R01,R02,R03           P25         2001-000065         R-CARBON         10K0HM,5%,1/4W,AA,TP,2.4X6.4MM         5         R06,R07,R08,R12,I           P26         2001-000076         R-CARBON         10K0HM,5%,1/4W,AA,TP,2.4X6.4MM         2         R16,R21           P26         2001-00032         R-CARBON         47K0HM,5%,1/4W,AA,TP,2.4X6.4MM         4         R33,R34,R35,R36           P27         2001-000675         R-CARBON         1MOHM,5%,1/4W,AA,TP,2.4X6.4MM         2         R10,R23           P29         2001-000611         R-CARBON         3.9K0HM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,I           P29         2001-000611         R-CARBON         3.9K0HM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,I           P30         2004-000193         R-METAL         100Kohm,1%,1/4W,AA,TP,2.4x6.4MM         5         R20,R29,R30,R31,I           P31         2004-001118         R-METAL         1Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R19           P32         2004-00193         R-METAL         1Kohm,1%,1/4W,AA,TP,2.4x						
P24         2001-000062         R-CARBON         4700HM,5%,1/4W,AA,TP,2.4X6.4MM         3         R01,R02,R03           P25         2001-000065         R-CARBON         10KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R06,R07,R08,R12,I           P26         2001-000065         R-CARBON         10KOHM,5%,1/4W,AA,TP,2.4X6.4MM         2         R16,R21           P26         2001-000432         R-CARBON         47KOHM,5%,1/4W,AA,TP,2.4X6.4MM         4         R33,R34,R35,R36           P27         2001-000575         R-CARBON         1MOHM,5%,1/4W,AA,TP,2.4X6.4MM         2         R10,R23           P29         2001-000611         R-CARBON         3,9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,F           P29         2001-000611         R-CARBON         3,9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,F           P30         2004-000133         R-METAL         100Kohm,1%,1/4W,AA,TP,2.4x6.4MM         5         R20,R29,R30,R31,F           P31         2004-001118         R-METAL         1Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R19           P31         2004-000432         R-METAL         1Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R22           P32         2004-001118         R-METAL         1Kohm,1%,5%,5V,FP,1,2.4x6.5						
P25         2001-000065         R-CARBON         10KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R06,R07,R08,R12,I           P26         2001-000076         R-CARBON         10KOHM,5%,1/4W,AA,TP,2.4X6.4MM         2         R16,R21           P27         2001-000432         R-CARBON         47KOHM,5%,1/4W,AA,TP,2.4X6.4MM         4         R33,R34,R35,R36           P28         2001-000575         R-CARBON         1MOHM,5%,1/4W,AA,TP,2.4X6.4MM         2         R24,R25           P29         2001-000611         R-CARBON         3,9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,I           P29         2001-000611         R-CARBON         3,9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,I           P30         2004-000133         R-CARBON         3,9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,I           P31         2004-00118         R-CARBON         3,9KOHM,5%,1/4W,AA,TP,2.4X6.4mM         5         R20,R29,R30,R31,I           P32         2004-00118         R-METAL         10K0hm,1%,1/4W,AA,TP,2.4X6.4mm         1         R19           P33         2201-000442         C-CERAMIC,DISC         3,3nF,10%,50V,X7R,,08x5.0         4         C14,C15,C16,C17           P34         2201-000817         C-CERAMIC,MILC-AXIAL						
P25         2001-000065         R-CARBON         10KOHM,5%,1/4W,AA,TP,2.4X6.4MM         2         R16,R21           P26         2001-000076         R-CARBON         47KOHM,5%,1/4W,AA,TP,2.4X6.4MM         4         R33,R34,R35,R36           P27         2001-000432         R-CARBON         1MOHM,5%,1/4W,AA,TP,2.4X6.4MM         2         R24,R25           P28         2001-000611         R-CARBON         3.9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,I           P29         2001-000611         R-CARBON         3.9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,I           P29         2001-000611         R-CARBON         3.9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R20,R29,R30,R31,I           P30         2004-000118         R-METAL         100Kohm,1%,1/4W,AA,TP,2.4X6.4mM         1         R19           P31         2004-000118         R-METAL         1Kohm,1%,1/4W,AA,TP,2.4X6.4mm         1         R26           P32         2004-00118         R-METAL         5Kohm,1%,1/4W,AA,TP,2.4X6.4mm         1         R26           P33         2201-000817         C-CERAMIC,DISC         3.3nf,10%,50V,X7R,08x5.0         4         C14,C15,C16,C17           P35         2202-000780         C-CERAMIC,MIC-AXIAL         100nf,+80-20%,50V,F9,TP,5x1,5 <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td>	1					
P26         2001-00076         R-CARBON         47K0HM,5%,1/4W,AA,TP,2.4X6.4MM         4         R33,R34,R35,R36           P27         2001-000432         R-CARBON         1M0HM,5%,1/4W,AA,TP,2.4X6.4MM         2         R24,R25           P28         2001-000611         R-CARBON         2K0HM,5%,1/4W,AA,TP,2.4X6.4MM         2         R11,R13,R15,R17,I           P29         2001-000611         R-CARBON         3.9K0HM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,I           P30         2004-000131         R-CARBON         3.9K0HM,5%,1/4W,AA,TP,2.4X6.4MM         5         R20,R29,R30,R31,I           P31         2004-000132         R-METAL         100Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R19           P31         2004-001118         R-METAL         1Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R26           P33         2201-000422         C-CERAMIC,DISC         3.3nF,10%,50V,X7R,08x5.0         4         C14,C15,C16,C17           P34         2201-000817         C-CERAMIC,DISC         22pF,79.8,50V,Y5V,TP,3.55x1         5         C05,C06,C07,C12,C08,C9V,GP,TP,4x4,5           P36         2401-00030         C-AL         100nF,+80-20%,50V,FP,T9,4x1,5         1         C18           P37         2401-00044         C-AL         100uF,20%,25V,GP,TP,5x7,						
P27         2001-000432         R-CARBON         1M0HM,5%,1/4W,AA,TP,2.4X6.4MM         2         R24,R25           P28         2001-000575         R-CARBON         2K0HM,5%,1/4W,AA,TP,2.4X6.4MM         2         R10,R23           P29         2001-000611         R-CARBON         3.9K0HM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,f           P30         2004-000193         R-METAL         100Kohm,1%,1/4W,AA,TP,2.4X6.4mM         5         R20,R29,R30,R31,f           P31         2004-000132         R-METAL         1Kohm,1%,1/4W,AA,TP,2.4X6.4mm         1         R19           P31         2004-00118         R-METAL         1Kohm,1%,1/4W,AA,TP,2.4X6.4mm         1         R26           P32         2004-00118         R-METAL         5Kohm,1%,1/4W,AA,TP,2.4X6.4mm         1         R26           P33         2201-000817         C-CERAMIC,DISC         23,3nF,10%,50V,X7R,,08x5.0         4         C14,C15,C16,C17           P35         2202-000780         C-CERAMIC,DISC         22pF,798,50V,Y5V,TP,4x4,5         2         C08,C09           P35         2202-000780         C-AL         100nF,+80-20%,50V,FP,TP,5x1,5         5         C05,C06,C07,C12,f           P36         2401-000159         C-AL         100uF,20%,25V,GP,-TP,5x1,5         1         C						
P28         2001-000575         R-CARBON         2KOHM,5%,1/4W,AA,TP,2.4X6.4MM         2         R10,R23           P29         2001-000611         R-CARBON         3.9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,F           P29         2001-000611         R-CARBON         3.9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,F           P30         2004-000193         R-METAL         100Kohm,1%,1/4W,AA,TP,2.4X6.4mm         1         R19           P31         2004-00118         R-METAL         1Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R26           P32         2004-00118         R-METAL         5Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R26           P32         2004-00118         R-METAL         5Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R26           P33         2201-000817         C-CERAMIC,DISC         22pF,79.8,50V,75V,TP,2.4x5.         2         C08,009           P35         2202-000780         C-CERAMIC,DISC         22pF,79.8,50V,75V,TP,3x55.         1         C18           P36         2401-00030         C-AL         100nF,+80-20%,50V,75V,TP,3x55.         1         C08,009           P38         2401-000460         C-AL         100uF,20%,25V,GP,TP,5x1.5         1         C03						
P29         2001-000611         R-CARBON         3.9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R11,R13,R15,R17,R13,R15,R17,R13,R15,R17,R13,R15,R17,R13,R15,R17,R13,R12,R13,R15,R17,R13,R12,R13,R13,R13,R15,R17,R13,R12,R13,R13,R13,R13,R13,R13,R13,R13,R13,R13						
P29         2001-000611         R-CARBON         3.9KOHM,5%,1/4W,AA,TP,2.4X6.4MM         5         R20,R29,R30,R31,f           P30         2004-000193         R-METAL         100Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R19           P31         2004-000432         R-METAL         1Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R26           P32         2004-000442         C-CERAMIC,DISC         3.3nF,10%,50V,X7R,,08x5.0         4         C14,C15,C16,C17           P34         2201-000817         C-CERAMIC,DISC         22pF,79.8,50V,Y5V,TP,4x4,5         2         C08,C09           P35         2202-000780         C-CERAMIC,MLC-AXIAL         100nF,+80-20%,50V,Y5V,TP,3.5x1         5         C05,C06,C07,C12,0           P36         2401-00030         C-AL         1000H, 20%,25V,GP,TP,5x11,5         1         C18           P37         2401-000159         C-AL         100UF, 20%,25V,GP,TP,5x7,5         1         C04           P39         2401-000466         C-AL         10UF,20%,35V,GP,TP,5x7,5         2         C10,C11           P40         2401-001415         C-AL         1uF,20%,50V,GP,TP,4x7,5         1         C13           P41         2401-001415         C-AL         1uF,20%,50V,GP,TP,10x20,5         2         C01,C02						
P30         2004-000193         R-METAL         100Kohm,1%,1/4W,AA,TP,2.4x6.4m         1         R19           P31         2004-000432         R-METAL         1Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R26           P32         2004-001118         R-METAL         5Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R22           P33         2201-000442         C-CERAMIC,DISC         3.3nF,10%,50V,X7R,-,-,08x5.0         4         C14,C15,C16,C17           P34         2201-000817         C-CERAMIC,DISC         22pF,79.8,50V,Y5V,TP,4x4,5         2         C08,C09           P35         2202-000780         C-CERAMIC,MLC-AXIAL         100nF,+80-20%,50V,Y5V,TP,3.5x1         5         C05,C06,C07,C12,0           P36         2401-000030         C-AL         1000uF,20%,25V,GP,TP,5x11,5         1         C18           P37         2401-000159         C-AL         100uF,20%,25V,GP,TP,5x1,5         1         C03           P38         2401-000244         C-AL         10uF,20%,35V,GP,TP,5x7,5         1         C04           P39         2401-000598         C-AL         10uF,20%,35V,GP,TP,5x7,5         2         C10,C11           P40         2401-001415         C-AL         470uF,20%,35V,GP,TP,10x20,5         2         C01,C02           P42						
P31         2004-000432         R-METAL         1 Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1 R26           P32         2004-001118         R-METAL         5Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1 R22           P33         2201-000442         C-CERAMIC,DISC         3.3nF,10%,50V,X7R,,-08x5.0         4 C14,C15,C16,C17           P34         2201-000817         C-CERAMIC,DISC         22pF,79.8,50V,Y5V,TP,4x4,5         2 C08,C09           P35         2202-000780         C-CERAMIC,MLC-AXIAL         100nF,+80-20%,50V,Y5V,TP,3.5x1         5 C05,C06,C07,C12,0           P36         2401-00030         C-AL         100nF,+80-20%,50V,FV,TP,3.5x1         5 C05,C06,C07,C12,0           P37         2401-000159         C-AL         1000uF,20%,25V,GP,TP,5x11,5         1 C03           P38         2401-000244         C-AL         100uF,20%,25V,GP,TP,5x7,5         1 C04           P39         2401-000466         C-AL         10uF,20%,35V,GP,TP,63x7,5         2 C10,C11           P40         2401-000496         C-AL         1uF,20%,50V,GP,TP,4x7,5         2 C01,C02           P42         2802-000143         RESONATOR-CERAMIC         470uF,20%,35V,GP,TP,100.x5.0x7.5mm         1 XTAL           P43         3404-001022         SWITCH-TACT         5WITCH-TACT         5WITCH-TACT         5WITCH-TACT	1					
P32         2004-001118         R-METAL         5Kohm,1%,1/4W,AA,TP,2.4x6.4mm         1         R22           P33         2201-000442         C-CERAMIC,DISC         3.3nF,10%,50V,X7R,-,-08x5.0         4         C14,C15,C16,C17           P34         2201-000817         C-CERAMIC,DISC         22pF,79.8,50V,Y5V,TP,4x4,5         2         C08,C09           P35         2202-000780         C-CERAMIC,MLC-AXIAL         100nF,+80-20%,50V,Y5V,TP,3.5x1         5         C05,C06,C07,C12,0           P36         2401-000030         C-AL         1000F,+80-20%,50V,GP,TP,5x11,5         1         C18           P37         2401-000159         C-AL         1000F,20%,25V,GP,TP,5x11,5         1         C03           P38         2401-000244         C-AL         100uF,20%,25V,GP,TP,6.3x7,5         1         C04           P39         2401-000466         C-AL         10uF,20%,35V,GP,TP,5x7,5         2         C10,C11           P40         2401-000598         C-AL         1uF,20%,50V,GP,TP,4x4,5         2         C01,C02           P41         2401-001415         C-AL         1uF,20%,50V,GP,TP,4x7,5         1         C13           P42         2802-000143         RESONATOR-CERAMIC         470uF,20%,35V,GP,TP,10.0x5.0x7.5mm         1         XTAL						
P33         2201-000442         C-CERAMIC,DISC         3.3nF,10%,50V,X7R,-,-,08x5.0         4         C14,C15,C16,C17           P34         2201-000817         C-CERAMIC,DISC         22pF,79.8,50V,Y5V,TP,4x4,5         2         C08,C09           P35         2202-000780         C-CERAMIC,MLC-AXIAL         100nF,+80-20%,50V,Y5V,TP,3.5x1         5         C05,C06,C07,C12,0           P36         2401-00030         C-AL         22uF,20%,25V,GP,TP,5x11,5         1         C18           P37         2401-000159         C-AL         100uF,20%,10V,GP,TP,6.3x7,5         1         C03           P38         2401-000244         C-AL         10uF,20%,35V,GP,TP,5x7,5         2         C10,C11           P40         2401-000598         C-AL         10uF,20%,35V,GP,TP,5x7,5         2         C10,C11           P40         2401-001415         C-AL         470uF,20%,35V,GP,TP,10x20,5         2         C01,C02           P41         2401-001415         C-AL         470uF,20%,35V,GP,TP,10x20,5         2         C01,C02           P42         2802-000143         RESONATOR-CERAMIC         4.19MHz,0.5%,TP,10.0x5.0x7.5mm         1         XTAL           P44         3711-000881         CONNECTOR-HEADER         BOX,3P,1R,2.5mm,STRAIGHT,SN         2         C0N05,CON07 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
P34         2201-000817         C-CERAMIC,DISC         22pF,79.8,50V,Y5V,TP,4x4,5         2         C08,C09           P35         2202-000780         C-CERAMIC,MLC-AXIAL         100nF,+80-20%,50V,Y5V,TP,3.5x1         5         C05,C06,C07,C12,0           P36         2401-00030         C-AL         22uF,20%,25V,GP,TP,5x11,5         1         C18           P37         2401-000159         C-AL         1000uF,20%,25V,GP,-13x25x7.5m         1         C03           P38         2401-000244         C-AL         100uF,20%,10V,GP,TP,6.3x7,5         1         C04           P39         2401-000466         C-AL         10uF,20%,35V,GP,TP,5x7,5         2         C10,C11           P40         2401-000598         C-AL         1uF,20%,50V,GP,TP,4x7,5         1         C13           P41         2401-001415         C-AL         470uF,20%,35V,GP,TP,10x20,5         2         C01,C02           P42         2802-000143         RESONATOR-CERAMIC         4.19MHz,0.5%,TP,10.0x5.0x7.5mm         1         XTAL           P43         3404-001022         SWITCH-TACT         15V,20mA,130° &40gf,6x6x5mm,SPS         14         SW01~SW14           P44         3711-000981         CONNECTOR-HEADER         BOX,3P,1R,2.5mm,STRAIGHT,SN         1         C0N03						
P35         2202-000780         C-CERAMIC,MLC-AXIAL         100nF,+80-20%,50V,Y5V,TP,3.5x1         5         C05,C06,C07,C12,0           P36         2401-00030         C-AL         22uF,20%,25V,GP,TP,5x11,5         1         C18           P37         2401-000159         C-AL         1000uF,20%,25V,GP,TP,5x7.5m         1         C03           P38         2401-000244         C-AL         100uF,20%,10V,GP,TP,63x7,5         1         C04           P39         2401-000466         C-AL         10uF,20%,35V,GP,TP,5x7,5         2         C10,C11           P40         2401-000598         C-AL         1uF,20%,50V,GP,TP,4x7,5         1         C13           P41         2401-001415         C-AL         470uF,20%,35V,GP,TP,10x20,5         2         C01,C02           P42         2802-000143         RESONATOR-CERAMIC         4.19MHz,0.5%,TP,10.0x5.0x7.5mm         1         XTAL           P43         3404-001022         SWITCH-TACT         15V,20mA,130°æ40gf,6x6x5mm,SPS         14         SW01~SW14           P44         3711-000881         CONNECTOR-HEADER         BOX,3P,1R,2.5mm,STRAIGHT,SN         2         C0N05,C0N07           P45         3711-000999         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1         C0N01						
P36         2401-00030         C-AL         22uF,20%,25V,GP,TP,5x11,5         1         C18           P37         2401-000159         C-AL         1000uF,20%,25V,GP,,13x25x7.5m         1         C03           P38         2401-000244         C-AL         100uF,20%,10V,GP,TP,6.3x7,5         1         C04           P39         2401-000466         C-AL         10uF,20%,35V,GP,TP,5x7,5         2         C10,C11           P40         2401-000598         C-AL         1uF,20%,50V,GP,TP,4x7,5         1         C13           P41         2401-001415         C-AL         470uF,20%,35V,GP,TP,10x20,5         2         C01,C02           P42         2802-000143         RESONATOR-CERAMIC         4.19MHz,0.5%,TP,10.0x5.0x7.5mm         1         XTAL           P43         3404-001022         SWITCH-TACT         15V,20mA,130° &40gf,6x6x5mm,SPS         14         SW01~SW14           P44         3711-000881         CONNECTOR-HEADER         BOX,3P,1R,2.5mm,STRAIGHT,SN         2         C0N05,C0N07           P45         3711-000999         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1         C0N01           P47         DE13-20009A         IC         KA7533,DIP         1         IC03           P48         DE39-60001A </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
P37         2401-000159         C-AL         1000uF,20%,25V,GP,-,13x25x7.5m         1         C03           P38         2401-000244         C-AL         100uF,20%,10V,GP,TP,6.3x7,5         1         C04           P39         2401-000466         C-AL         10uF,20%,35V,GP,TP,5x7,5         2         C10,C11           P40         2401-000598         C-AL         1uF,20%,50V,GP,TP,4x7,5         1         C13           P41         2401-001415         C-AL         470uF,20%,35V,GP,TP,10x20,5         2         C01,C02           P42         2802-000143         RESONATOR-CERAMIC         4.19MHz,0.5%,TP,10.0x5.0x7.5mm         1         XTAL           P43         3404-001022         SWITCH-TACT         15V,20mA,130°&40gf,6x6x5mm,SPS         14         SW01~SW14           P44         3711-000881         CONNECTOR-HEADER         BOX,3P,1R,2.5mm,STRAIGHT,SN         2         CON05,CON07           P45         3711-000990         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1         CON03           P46         3711-000999         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1         C0N01           P47         DE13-20009A         IC         KA7533,DIP         1         IC         IC           P					-	
P38         2401-000244         C-AL         100uF,20%,10V,GP,TP,6.3x7,5         1         C04           P39         2401-000466         C-AL         10uF,20%,35V,GP,TP,5x7,5         2         C10,C11           P40         2401-000598         C-AL         1uF,20%,50V,GP,TP,4x7,5         1         C13           P41         2401-001415         C-AL         470uF,20%,35V,GP,TP,10x20,5         2         C01,C02           P42         2802-000143         RESONATOR-CERAMIC         4.19MHz,0.5%,TP,10.0x5.0x7.5mm         1         XTAL           P43         3404-001022         SWITCH-TACT         15V,20mA,130°&40gf,6x6x5mm,SPS         14         SW01~SW14           P44         3711-000881         CONNECTOR-HEADER         BOX,3P,1R,2.5mm,STRAIGHT,SN         2         CON05,CON07           P45         3711-000990         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1         CON03           P46         3711-000999         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1         CON01           P47         DE13-20009A         IC         KA7533,DIP         1         IC03           P48         DE39-60001A         WIRE HARNESS-F         PI0.6,SN,T,52MM,TAPING_WIRE         35         J01~J35						
P39         2401-000466         C-AL         10uF,20%,35V,GP,TP,5x7,5         2         C10,C11           P40         2401-000598         C-AL         1uF,20%,50V,GP,TP,4x7,5         1         C13           P41         2401-001415         C-AL         470uF,20%,35V,GP,TP,10x20,5         2         C01,C02           P42         2802-000143         RESONATOR-CERAMIC         4.19MHz,0.5%,TP,10.0x5.0x7.5mm         1         XTAL           P43         3404-001022         SWITCH-TACT         15V,20mA,130°&40gf,6x6x5mm,SPS         14         SW01~SW14           P44         3711-000881         CONNECTOR-HEADER         BOX,3P,1R,2.5mm,STRAIGHT,SN         2         CON05,CON07           P45         3711-000990         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1         CON03           P46         3711-000999         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1         CON01           P47         DE13-20009A         IC         KA7533,DIP         1         IC03           P48         DE39-40113A         WIRE HARNESS-F         110/220V,60HZ,MX200TCC,130MMX3         1         -           P49         DE39-60001A         WIRE-SO COPPER         PI0.6,SN,T,52MM,TAPING_WIRE         35         J01~J35						
P40         2401-000598         C-AL         1uF,20%,50V,GP,TP,4x7,5         1 C13           P41         2401-001415         C-AL         470uF,20%,35V,GP,TP,10x20,5         2 C01,C02           P42         2802-000143         RESONATOR-CERAMIC         4.19MHz,0.5%,TP,10.0x5.0x7.5mm         1 XTAL           P43         3404-001022         SWITCH-TACT         15V,20mA,130°æ40gf,6x6x5mm,SPS         14 SW01~SW14           P44         3711-000881         CONNECTOR-HEADER         BOX,3P,1R,2.5mm,STRAIGHT,SN         2 CON05,C0N07           P45         3711-000940         CONNECTOR-HEADER         BOX,4P,1R,2.5mm,STRAIGHT,SN         1 CON03           P46         3711-000999         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1 CON01           P47         DE13-20009A         IC         KA7533,DIP         1 IC03           P48         DE39-40113A         WIRE HARNESS-F         110/220V,60HZ,MX200TCC,130MMX3         1 -           P49         DE39-60001A         WIRE-SO COPPER         PI0.6,SN,T,52MM,TAPING_WIRE         35 J01~J35						
P41         2401-001415         C-AL         470uF,20%,35V,GP,TP,10x20,5         2         C01,C02           P42         2802-000143         RESONATOR-CERAMIC         4.19MHz,0.5%,TP,10.0x5.0x7.5mm         1         XTAL           P43         3404-001022         SWITCH-TACT         15V,20mA,130°æ40gf,6x6x5mm,SPS         14         SW01~SW14           P44         3711-000881         CONNECTOR-HEADER         BOX,3P,1R,2.5mm,STRAIGHT,SN         2         C0N05,C0N07           P45         3711-000940         CONNECTOR-HEADER         BOX,4P,1R,2.5mm,STRAIGHT,SN         1         C0N03           P46         3711-000999         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1         C0N01           P47         DE13-20009A         IC         KA7533,DIP         1         IC03           P48         DE39-40113A         WIRE HARNESS-F         110/220V,60HZ,MX200TCC,130MMX3         1         -           P49         DE39-60001A         WIRE-SO COPPER         PI0.6,SN,T,52MM,TAPING_WIRE         35         J01~J35						
P42         2802-000143         RESONATOR-CERAMIC         4.19MHz,0.5%,TP,10.0x5.0x7.5mm         1         XTAL           P43         3404-001022         SWITCH-TACT         15V,20mA,130°æ40gf,6x6x5mm,SPS         14         SW01~SW14           P44         3711-000881         CONNECTOR-HEADER         BOX,3P,1R,2.5mm,STRAIGHT,SN         2         CON05,C0N07           P45         3711-000940         CONNECTOR-HEADER         BOX,4P,1R,2.5mm,STRAIGHT,SN         1         CON03           P46         3711-000999         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1         CON01           P47         DE13-20009A         IC         KA7533,DIP         1         IC03           P48         DE39-40113A         WIRE HARNESS-F         110/220V,60HZ,MX200TCC,130MMX3         1         -           P49         DE39-60001A         WIRE-SO COPPER         PI0.6,SN,T,52MM,TAPING_WIRE         35         J01~J35						
P43         3404-001022         SWITCH-TACT         15V,20mA,130°&40gf,6x6x5mm,SPS         14         SW01~SW14           P44         3711-000881         CONNECTOR-HEADER         BOX,3P,1R,2.5mm,STRAIGHT,SN         2         CON05,CON07           P45         3711-000940         CONNECTOR-HEADER         BOX,4P,1R,2.5mm,STRAIGHT,SN         1         CON03           P46         3711-000999         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1         CON01           P47         DE13-20009A         IC         KA7533,DIP         1         IC03           P48         DE39-40113A         WIRE HARNESS-F         110/220V,60HZ,MX200TCC,130MMX3         1         -           P49         DE39-60001A         WIRE-SO COPPER         PI0.6,SN,T,52MM,TAPING_WIRE         35         J01~J35						
P44         3711-000881         CONNECTOR-HEADER         B0X,3P,1R,2.5mm,STRAIGHT,SN         2         CON05,CON07           P45         3711-000940         CONNECTOR-HEADER         B0X,4P,1R,2.5mm,STRAIGHT,SN         1         CON03           P46         3711-000999         CONNECTOR-HEADER         B0X,5P,1R,2.5mm,STRAIGHT,SN         1         CON01           P47         DE13-20009A         IC         KA7533,DIP         1         IC03           P48         DE39-40113A         WIRE HARNESS-F         110/220V,60HZ,MX200TCC,130MMX3         1         -           P49         DE39-60001A         WIRE-SO COPPER         PI0.6,SN,T,52MM,TAPING_WIRE         35         J01~J35						
P45         3711-000940         CONNECTOR-HEADER         B0X,4P,1R,2.5mm,STRAIGHT,SN         1         CON03           P46         3711-000999         CONNECTOR-HEADER         B0X,5P,1R,2.5mm,STRAIGHT,SN         1         CON01           P47         DE13-20009A         IC         KA7533,DIP         1         IC03           P48         DE39-40113A         WIRE HARNESS-F         110/220V,60HZ,MX200TCC,130MMX3         1         -           P49         DE39-60001A         WIRE-SO COPPER         PI0.6,SN,T,52MM,TAPING_WIRE         35         J01~J35						
P46         3711-000999         CONNECTOR-HEADER         BOX,5P,1R,2.5mm,STRAIGHT,SN         1         CON01           P47         DE13-20009A         IC         KA7533,DIP         1         IC03           P48         DE39-40113A         WIRE HARNESS-F         110/220V,60HZ,MX200TCC,130MMX3         1         -           P49         DE39-60001A         WIRE-SO COPPER         PI0.6,SN,T,52MM,TAPING_WIRE         35         J01~J35						
P47         DE13-20009A         IC         KA7533,DIP         1         IC03           P48         DE39-40113A         WIRE HARNESS-F         110/220V,60HZ,MX200TCC,130MMX3         1         -           P49         DE39-60001A         WIRE-SO COPPER         PI0.6,SN,T,52MM,TAPING_WIRE         35         J01~J35						
P48         DE39-40113A         WIRE HARNESS-F         110/220V,60HZ,MX200TCC,130MMX3         1         -           P49         DE39-60001A         WIRE-SO COPPER         PI0.6,SN,T,52MM,TAPING_WIRE         35         J01~J35						
P49   DE39-60001A   WIRE-SO COPPER						
						J01~J35
P50   DE41-10108A   P.C.B-MAIN-SUB   FR-1,T1.6,W197,L327,RE-1280   1   PCB	P50	DE41-10108A	P.C.B-MAIN-SUB	FR-1,T1.6,W197,L327,RE-1280		PCB
P51   DE92-90093D   ASSY-HEAT SINK   JVM-190K,A-TYPE   1   -					1	-

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## 9. Schematic Diagram & Wiring Diagram

## 9-1 Schematic Diagram

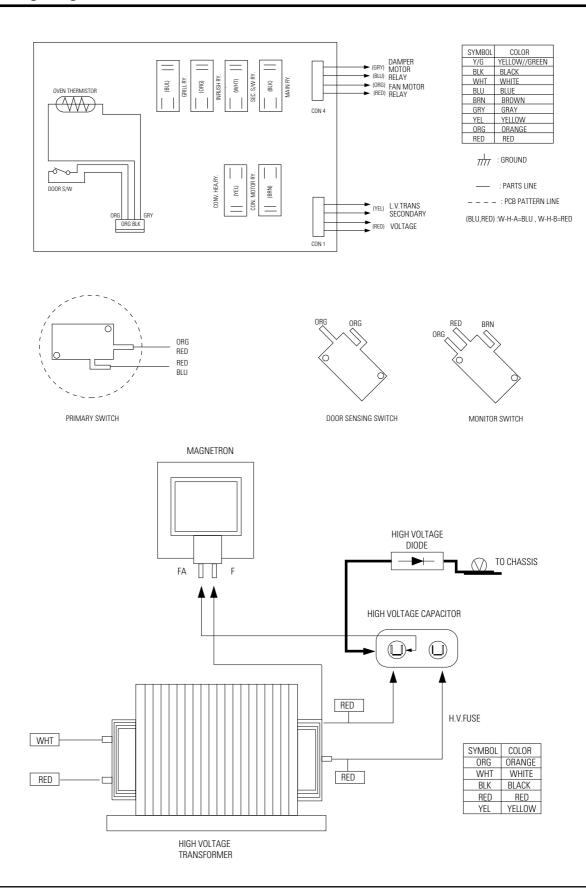


<sup>\*</sup> Switches and relays status according to each condition

Condition	DOOR OPEN	DOOR CLOSE	MICRO- WAVE	GRILL	CONVEC -TION	MW0+ GRILL	MW0+ CONV.	GRILL+ CONV.
PRI.S/W	OPEN	CLOSE	CLOSE	CLOSE	CLOSE	CLOSE	CLOSE	CLOSE
MON.S/W	CLOSE	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
MAIN RY	ON	OFF	ON	ON	ON	ON	ON	ON
SEC.S/W RY	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
GRILL RY	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
CONV. HEA.RY	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
FAN.MTR.RY	OFF	OFF	ON	ON	ON	ON	ON	ON
DAMPER RY	OFF	OFF	OFF	ON	ON	ON	ON	ON
CONV.MTR.RY	OFF	OFF	OFF	ON	ON	ON	ON	ON

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## 9-2 Wiring Diagram



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